

CLAIMS

What is claimed:

- 5 1. A system for draining fluid from a layered soil profile, comprising:
- (a) a layered soil profile; and
 - (b) an array of fibrous capillary drains inserted at regular intervals into said soil profile, and wherein said fibrous capillary drains traverse one of more of the layers of said soil profile.
- 10 2. The system of claim 1, wherein said layered soil profile further comprises a root zone and a gravel layer beneath said root zone, and wherein said capillary drains provide a continuous porous pathway of capillary pores extending from the lower reaches of said root zone through said gravel layer.
- 15 3. The system of claim 1, wherein the orientation of said capillary drains in said soil profile is substantially vertical.
- 20 4. The system of claim 1, wherein each of said capillary drains further comprises a length of fiberglass rope, a length of fiberglass tape, or a contained column of sand or similar particulate matter.
- 25 5. The system of claim 1, wherein said fiberglass rope has a diameter of about 0.64 to 2.54 cm.
6. The system of claim 1, wherein said fluid is perched water retained in one or more layers of said layered soil profile.
- 30 7. A method of draining fluid from a layered soil profile, comprising the step of inserting, in a substantially vertical orientation, an array of fibrous capillary drains at regular intervals into said soil profile such that said fibrous capillary drains traverse one of more of the layers of said soil profile and provide a continuous porous pathway of capillary pores extending between said layers.

8. The method of claim 7, wherein said layered soil profile further comprises a root zone and a gravel layer beneath said root zone, and wherein said capillary drains extend from the lower reaches of said root zone through said gravel layer.

5 9. The method of claim 7, wherein each of said capillary drains further comprises a length of fiberglass rope.

10. The method of claim 8, wherein said fiberglass rope has a diameter of about 0.64 to 2.54 cm.

10 11. The method of claim 7, wherein said fluid is perched water retained in one or more layers of said layered soil profile.

12. A method of draining fluid from a layered soil profile, comprising the steps of:

15 (a) removing a sample of said layered soil profile;
(b) separating the layers of said soil profile;
(c) determining the particle size of said layers;
(d) inferring the water retention properties of said layers from said particle size; and
(e) inserting a plurality of fibrous capillary drains at regular intervals into said soil
20 profile such that said fibrous capillary drains traverse one or more of the layers of said soil profile.

13. The method of claim 12, wherein said layered soil profile further comprises a root zone and a gravel layer beneath said root zone, and wherein said capillary drains provide a
25 continuous porous pathway of capillary pores extending from the lower reaches of said root zone through said gravel layer.

14. The method of claim 12, wherein the orientation of said capillary drains in said soil profile is substantially vertical.

30 15. The method of claim 12, wherein each of said capillary drains further comprises a length of fiberglass rope, a length of fiberglass tape, or a contained column of sand or similar particulate matter.

16. The method of claim 15, wherein said fiberglass rope has a diameter of about 0.64 to 2.54 cm.

5 17. The method of claim 12, wherein said fluid is perched water retained in one or more layers of said layered soil profile.

18. The method of claim 12, wherein said capillary drains are spaced about 24 inches (61 cm) from one another.

10 19. The method of claim 12, wherein said soil profile is a putting green.

20. The method of claim 12, wherein said insertion of said capillary drains further comprises the steps of:

- 15 (a) creating a pilot hole in said soil profile extending from the surface of the ground to the maximum depth of drain insertion, and wherein the diameter of said pilot hole is slightly greater than the diameter of said capillary drain;
- (b) inserting said capillary drain into said pilot hole by attaching a material different than and of greater stiffness than the material of said capillary drain to said drain; and
- (c) backfilling said pilot hole with the soil of said soil profile.

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